

Mountain gorillas in dire straits, DNA reveals

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MOUNTAIN gorillas are in more trouble than we thought. Fewer of them are living in Uganda's Bwindi Impenetrable National Park (BINP) than previous estimates suggest. This is one of only two places worldwide where the gorillas survive in the wild.

Traditionally, conservationists estimate gorilla numbers by counting nests and examining the dung outside each one. "Each individual constructs a nest to sleep in, and before they leave in the morning, they defecate outside it," says Katerina Guschanski at the Max Planck Institute for Evolutionary Anthropology in Leipzig, Germany.

According to this method, there are 336 gorillas left in the 331-square-kilometre national park. But when Guschanski's team analysed DNA samples from each pile of dung using a new genetic counting method, the population estimate dropped by 10 per cent to 302. This suggests that some individuals had been counted twice using the old technique (Biological Conservation, DOI: 10.1016/j.biocon.2008.10.024).

"We assumed that each individual constructs a single nest, but genetic analysis shows that several individuals construct more than one nest," says Guschanski. This has been observed in studies of lowland gorillas, who construct more than one nest if the original nest starts leaking during a rainstorm, or if a youngster finds the one that it has just built uncomfortable, she adds.

"It is a great confirmation of what new molecular techniques can do for wildlife censusing," says Marcus Rowcliffe of the Institute of Zoology in London.

It might also mean that the gorilla population in the park is not growing after all - a census in 1997 found 300 gorillas, while one in 2003 found 320 individuals, but these figures may also be inaccurate. "Now we don't really know what is happening with this population," says Guschanski. "Probably the safest thing is to assume that the population is stable, but we will need to wait for another four to five years to assess how it is changing."

Although it is bad news that the population is slightly smaller than expected, "it is much better to have an accurate estimation of the population", says James Burton of the Earthwatch Institute in Oxford, UK. "Knowing whether it is increasing or decreasing governs the conservation activities."

The estimate of 380 for the mountain gorillas living in the other main reserve - Virunga National Park in the Democratic Republic of Congo - may be more accurate, as the gorillas are more accustomed to human contact and can therefore be counted directly.